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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,123	07/02/2003	Omid Mahdavi	TI-35198	3930

7590 11/28/2005  
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EXAMINER
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LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/612,123

Applicant(s)

MAHDAVI, OMID

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 12-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-11, and 23-26, in the reply filed on September 12, 2005 is acknowledged. The traversal is on the ground(s) that the MPEP is allegedly in error in indicating that a restriction can be made if the invention is independent or distinct not independent and distinct as required in 35 USC 121; and that the additional search would not be a burden to the Examiner. This is not found persuasive because the MPEP is the official interpretation of 35 USC 121, and clearly explains the Commissioner's reasoning in interpreting 35 USC 121. Examiner Deo has met all the requirements for showing that the two inventions are distinct as required by the MPEP. An invention that includes a method and apparatus for its use places a serious burden on the Examiner because most apparatus are capable of performing multiple methods, and limitation that would place the method in condition for allowance may be merely intended use of the apparatus. Therefore, the method and apparatus have different searches, reasons and motivations, and case law. This requires the Examiner to conduct two simultaneous examinations, one for the method, and one for the apparatus. Thus, there is a serious burden placed on the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public

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use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6-8, 10, 11, 23, 25, and 26 rejected under 35 U.S.C. 102(b) as being anticipated by Moise et al, US Patent 6,211,035 B1.

Moise et al teaches a plasma etcher (Figure 1a) for etching a substrate having a resistor material layer formed of NiCr (column 8 lines 54-59) for a thin film resistor. The plasma etcher: uses a plasma etch chemistry that includes a mixture of  $\text{Cl}_2$  and  $\text{BCl}_3$  (column 16 lines 23 and 24); a low pressure environment of 10 mTorr (figure 1a); a power level of 0-1500 watts (figure 1a); and an end point detector (figure 1a). The specific emission monitored is an intended use of the apparatus. The end point detector of Moise et al inherently detects emissions including chromium.

4. Claims 3 and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Moise et al, US Patent 6,211,035 B1.

Moise et al teaches supplying a plasma etch chemistry that includes a mixture of  $\text{Cl}_2$  and  $\text{BCl}_3$  (column 16 lines 23 and 24) as discussed above. Moise et al is capable of supplying the desired ratio of  $\text{Cl}_2$  and  $\text{BCl}_3$ .

Alternately, it would be obvious to one of ordinary skill in the art at the time the invention was made to supply the  $\text{Cl}_2$  and  $\text{BCl}_3$  at a desired ratio. The motivation to supply the desired ratio of  $\text{Cl}_2$  and  $\text{BCl}_3$  is to optimize the plasma etch chemistry.

5. Claims 1-8, and 23-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ohkawa et al, US Patent 6,375,860 B1.

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Ohkawa et al teaches a plasma etcher 30 for etching a substrate. The plasma etcher includes: a magnetically enhanced environment with a magnetic field strength of 5-500 gauss (column 8 lines 1-3); a low pressure environment of 1 mTorr to 1 Torr (column 9 lines 10-12); and a power level of 5-5000 watts (column 9 lines 30-35). (Entire document) The apparatus of Ohkawa et al is capable of supplying a plasma etch chemistry that includes a mixture of  $\text{Cl}_2$  and  $\text{BCl}_3$  at a desired ratio, and etching a substrate having a resistor material layer formed of NiCr or NiCrAl for a thin film resistor.

Alternately, it would be obvious to one of ordinary skill in the art at the time the invention was made to supply  $\text{Cl}_2$  and  $\text{BCl}_3$  at a desired ratio to etch a substrate having a resistor material layer formed of NiCr or NiCrAl. The motivation to supply the desired ratio of  $\text{Cl}_2$  and  $\text{BCl}_3$  is to optimize the plasma etch chemistry to etch the NiCr or NiCrAl layer to form a thin film resistor or other micro device. Furthermore, it has been held that: claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danley*, 120 USPQ 528, 531, (CCPQ 1959); "Apparatus claims cover what a device is, not what a device does" (Emphasis in original) *Hewlett-Packard Co. V. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); and a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus " if the prior art apparatus teaches all the structural limitations of the claim *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Also see MPEP 2114

6. Claims 1-7, 9 and 23-25 are rejected under 35 U.S.C. 102(b) as anticipated by

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or, in the alternative, under 35 U.S.C. 103(a) as obvious over Masuda et al, US Patent 6,171,438 B1.

Masuda et al teaches a plasma etcher 100 for etching a substrate W that includes; walls 102 with a temperature set between 20°C and 80°C (column 7 lines 23-43); and an anode and cathode 111, 130 with the temperature of the anode or cathode 130 set to 80°C (column 3 lines 56-65). The plasma etcher includes: a magnetically enhanced environment with a magnetic field generated by coils 101A-101C, and a low pressure environment of 0.1 Pa to 10 Pa (7.5 mTorr to 75 mTorr (column 4 lines 30-32). (Entire document, specifically Figure 1) The apparatus of Masuda et al is capable of supplying a plasma etch chemistry that includes a mixture of  $\text{Cl}_2$  and  $\text{BCl}_3$  at a desired ratio, etching a substrate having a resistor material layer formed of NiCr or NiCrAl for a thin film resistor, and applying a magnetic field of 45-55 Gauss.

Alternately, it would be obvious to one of ordinary skill in the art at the time the invention was made to supply  $\text{Cl}_2$  and  $\text{BCl}_3$  at a desired ratio to etch a substrate having a resistor material layer formed of NiCr or NiCrAl. The motivation to supply the desired ratio of  $\text{Cl}_2$  and  $\text{BCl}_3$  is to optimize the plasma etch chemistry to etch the NiCr or NiCrAl layer to form a thin film resistor or other micro device. Furthermore, it has been held that: claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danley*, 120 USPQ 528, 531, (CCPQ 1959); "Apparatus claims cover what a device is, not what a device does" (Emphasis in original) *Hewlett-Packard Co. V. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); and a claim containing a "recitation with respect to the manner in which a

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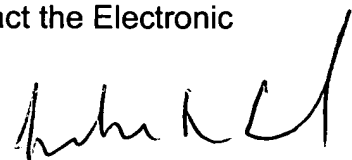
### **Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JEFFRIE R. LUND  
PRIMARY EXAMINER